

Animal Crackers



Rabies Vaccination Important for Dogs and Cats

There has been a dramatic increase in the number of rabies cases reported, particularly in Pennsylvania, Maryland, and the District of Columbia. The cause appears to be an outbreak of the disease in raccoons, with subsequent spillover to skunks, foxes, horses, dogs, and cats. In contrast, the number of cases in bats has remained relatively constant.

Cats are particularly at risk because of their free-roaming nature and hunting instincts. However, there are estimates that only about four percent of the approximately 53 million cats in the United States are vaccinated against rabies. The result is that for the past few years, there has been a higher frequency of rabies in cats than in dogs.

Dogs and cats should be vaccinated against rabies. Killed vaccines which give protection for three years are available. If one of these vaccines is used, cats and dogs should be vaccinated at three months and one year of age, then every three years. Be sure to have your veterinarian check the manufacturer's recommendation, as some vaccines give protection for less than three years.

At the present time, there is no approved method for vaccinating wild animals against rabies, although researchers are working to develop techniques, including an oral vaccine.



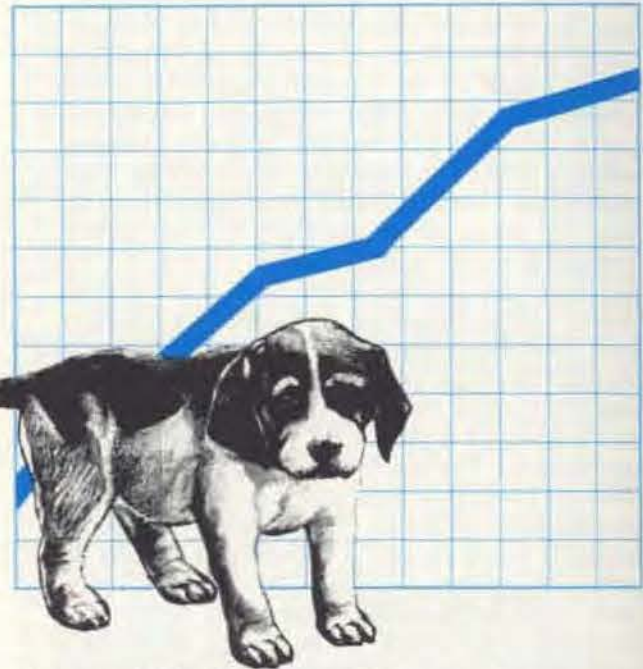
Class of 1990

The School of Veterinary Medicine, University of Pennsylvania, accepted 109 students for the first year class entering in September and graduating in 1990. There are 75 women and 34 men in the class. Of these, 72 come from Pennsylvania, and 28 from the states with contracts for admission of residents (15 from New Jersey, five from Maryland, three from Delaware, two from Connecticut, two from Vermont, and one from New Hampshire). There is one contract student from Puerto Rico. The other out-of-state students are: three from New York, one from Massachusetts, one from Michigan, and one from Texas. There are two foreign students—one from England and one from Singapore.

The minimum educational requirement for admission is three years in a college or university accredited by the Association of American Colleges and Universities or one of the regional accrediting associations. Required courses include English, Physics, General and Organic Chemistry, Biology or Zoology, Genetics, Social Sciences or Humanities, or Calculus. The scores obtained on the Graduate Record Examination Aptitude Test (GRE) must be submitted.

Application forms are distributed after July 1st and must be received by November 15th for the class entering in September of the following year. Further information may be obtained from the School of Veterinary Medicine, 3800 Spruce Street, Philadelphia, PA 19104.

Although there have been reports of a surplus of veterinarians, nearly 85 percent of recent graduates have entered some form of clinical practice. A number of nonpractic positions are available. There are public health positions in federal, state, and municipal governments. The Army veterinarians are also involved in public health work and some care for Army dogs and horses. Aquatic animal medicine is another field, and veterinarians also work with laboratory and zoo animals.



Growth Rate of Puppies

A steady weight gain is an important indicator of a puppy's good health. Puppies should gain weight the first day of life and continue to gain daily. The birth weight usually doubles within 7-10 days, and most reach 50 percent of their mature weight by four months. At about one year of age, most breeds reach their adult weight. Giant breeds such as Great Danes continue to grow until about 18 months of age and do not reach their mature weight until about two years of age.

A good management practice is to weigh pups at birth, daily for the first two weeks of life and then every three days until a month old, with periodic weight checks thereafter. A gram scale should be used. You should know the adult weight for the breed. The

New Poultry Laboratory

Construction of the Evan L. Stubbs Building at New Bolton Center will begin shortly. Named for the 1911 graduate, a pioneer in the study of avian infectious diseases, the new structure will house a sophisticated laboratory. "The Evan L. Stubbs Building is designed to safely deal with and manage research with infectious organisms, primarily of poultry," said Dr. Robert J. Eckroade, associate professor of poultry pathology and director of the poultry pathology laboratory at New Bolton Center. "Funding has been provided by the Commonwealth of Pennsylvania. Our primary task is to study avian influenza, a disease which has dealt devastating losses to Pennsylvania's poultry industry."

The new 43- by 65-foot one-story structure will have an impressive array of safeguards. "It will have two air handling systems, and in each the air will be filtered to remove all organisms, including any virus," Dr. Eckroade said. "It will be a very limited-access building with air locks, shower areas, one-way air flow, a special pathological incinerator, and a chemical treatment retention tank for effluent waste."

All these precautions are necessary, as the researchers will be dealing with infectious organisms pathogenic for food animals. "The building is primar-



ily for avian influenza research," said Dr. Eckroade. "This disease is devastating to the poultry industry, and while a lot is known about the influenza virus, we know very little about the disease it causes in poultry."

He explained that the avian influenza virus is present in wild migratory waterfowl and that it is quite resistant. "During the winter in Pennsylvania it can survive for about 105 days in the manure from infected birds." Pennsylvania took drastic measures to curtail the spread of the disease. Millions of chickens were depopulated before the disease was eradicated. However, there was another outbreak of a mild form of the disease on a Pennsylvania farm in early 1986.

The source of this outbreak was traced to trucks with dirty coops originating from the live bird, street markets system. "There is a large market for live chickens in New York City and other large cities," said Dr. Eckroade. "80,000 live birds are sold weekly in New York alone through about 40 street markets." He explained that suppliers for this market travel by truck from farm to farm to buy small flocks of

chickens. "It was found that these trucks were not cleaned and disinfected after each trip, thus it was possible for the virus to be introduced to the Pennsylvania farm." According to Dr. Eckroade, legislators are considering regulations making mandatory the cleaning and disinfecting of vehicles used for poultry transport.

The researchers at New Bolton Center will study the avian influenza virus infection of poultry, pheasants, turkeys, and ducks. The influenza research team at the University of Pennsylvania School of Veterinary Medicine includes Drs. Helen M. Acland, Charles Benson, Shennil Davison, Robert Eckroade, Linda Keller, and Ben Wolf. The Evan L. Stubbs Building will be part of the Cooperative Poultry Diagnostic Laboratory at New Bolton Center.

—H.W.

Second Century Fund

Gifts, subscription and bequests to the Second Century Fund now total \$26.6-million. During the last six months approximately 160 separate gifts have been recorded, ranging from \$10 to the clinical research fund from grateful pet owners to the completion of the endowment of one of the chairs in medicine.

pup should gain one to two grams per day for each pound of anticipated adult weight. For example, if an adult is expected to weigh 20 pounds, the pup should gain 20 to 40 grams per day for the first five months of life. (An ounce is slightly less than 30 grams.)

Supplemental feeding or a better quality diet is indicated if this growth rate is not achieved.

During the first few weeks of life, the puppy eats and sleeps. The twitching and jerking during activated sleep is important for muscle development. For the first two weeks, the puppy's body temperature is 94° to 97° F. There is no shivering reflex for the first six days, and the puppy is dependent on the mother or an external heat source to sustain normal temperature. Many puppy deaths are caused by chilling, and the bitch and puppies should be kept no lower than 70° F.

Check the weight to be sure the pups are thriving. Be sure they are kept warm.



Cold Weather Notes

Antifreeze is very toxic to dogs. Dogs seem to love it, and a very small amount can be fatal. Prompt veterinary attention is necessary if any is ingested. Be careful where you drain radiators.

If dogs are kept outside in cold weather, be sure they have a dry bed and protection from drafts. Additional feed may be needed. Avoid shifting between heated and unheated kennels. Different breeds have different requirements. All very young puppies must be kept warm.

City dogs often walk on salted sidewalks. Wash their feet with warm water regularly. Dry with a towel and check between the pads.

Dogs kept in warm apartments should wear a sweater or coat when taken outside in cold weather, especially toy breeds and those with short hair.

Cats may get under the hood of cars. There have been some nasty accidents. If this is the only warm place for your cat, it might be well to check its whereabouts before you start the car.

Don't neglect regular grooming. Bathing usually is not necessary if the dog is kept clean by brushing and combing. As a general rule, regular or frequent bathing is not necessary.

Many dogs will shiver when frightened, excited, or emotionally upset. They will shiver when they are cold. This is not necessarily a sign of illness.

Keep your vaccination schedule up-to-date. Some infectious diseases occur more frequently in cold weather.



Book Reviews

The Cat Lovers' Cookbook by Tony Lawson (Storey Communications, Inc., Pownal, VT 05261) \$4.95

This book offers nutritionally balanced recipes that are palatable for cats. They represent an alternative to commercial cat food. The Foreword, written by Dr. David S. Kronfeld, states that reciprocation is the basis of our relationship with cats. We have selected them as companions for our own pleasure and hopefully they enjoy us in the same way. We have taken away from cats the primitive ability to make their own choices. We now make some, though by no means all, important decisions in their lives. One of the main choices a cat owner faces is the best diet. The recipes offer an alternative to commercial cat food.

Cats do not thrive on diets used to feed dogs. Dr. Kronfeld's "Theme Recipe" uses ground meat and rice as staples because they are the main sources of energy. The supplements provide all of the essential nutrients not found in the staples: liver, bone meal, corn oil, and iodized salt.

The Theme Recipe:

- 2/3 cup ground meat
- 1/3 cup dry rice (brown or white)
- 2 tablespoons chopped liver
- 1 tablespoon bone meal
- 2 teaspoons corn oil
- 1/2 teaspoon iodized salt
- 1 cup water

Bring the water to a boil. Add the rice, corn oil and salt, and simmer for 20 minutes on low heat. Dredge the meat with the bone meal. Add the meat and liver to the rice mixture, stir, and simmer for another 15 minutes. Cool and serve. Yields 3 servings. Leftovers should be refrigerated or frozen. Variations of the theme recipe are discussed.

There are useful comments on nutrition and health scattered throughout the text.

... A fish-only diet is definitely unbalanced, but this can be corrected by adding the basic nutritional supplements (liver, bone meal, corn oil, iodized salt).

... Some fish contain an enzyme that reduces the ability to absorb thiamine, which is essential to normal metabolism and nerve function. This enzyme is destroyed by cooking, so it is a good idea to cook *all* fish before serving.

... You may add one teaspoon of salt to any of the recipes to help promote water intake.

... Both meat and cereal contain very little calcium, so it is advisable to add calcium supplements. Use only the amounts recommended, as too much calcium can diminish the absorption of other nutrients.

... Feline mother's milk has three times the protein of cow's milk, but much less sugar and fat.

There are a few "Tandem Recipes" for people who like to eat with their cats. Special diets are mentioned: Allergy Diet; a Soft Bland Diet for a delicate intestine; a Reducing Diet which also is suitable for cats with a history of F.U.S. (feline urological syndrome); Kidney Diet for impaired liver and kidney function; Diet for Urinary Stoppages to help prevent stone formation.

This is a book cat-lovers will enjoy, full of recipes that cats will enjoy too: Meowshi Sushi, Boogaloo Shrimp, Gizzard Goulash, Kitty Pizza, Turkey Surprise, and Kitty Fondue, plus many others.

Complete Book of Ponies by Lorna Howlett (Howell Book House, 230 Park Avenue, New York, NY 10169) \$12.95.

This fascinating book is about ponies the world over and the pleasures they bring to young and old. It tells how to judge the quality of a pony, how to select and care for a pony, and it has a chapter on pony clubs. All breeds of ponies are described along with the breed characteristics and standards of excellence.

Pony height is measured in "hands" (four inches). Measurements are taken from ground level to the highest point of the withers, and height limits vary for different breeds. The Shetland is the smallest, measuring about 10 hands while the upper limit for pony breeds is 14-2 hands.

The book covers 16 types classified as Ancient and Native Breeds. These include the Welsh, Shetland, and Hackney Ponies. Endangered species are the British Spotted Pony and the Caspian Pony. Rare breeds are the Dales and Exmoor Ponies. Others are the Dartmoor, Fell, Haflinger, Gotthland, Fjord, Highland, Icelandic, New Forest, and Connemara Ponies.

The chapter on Modern and Evolved Breeds gives information about Australian Ponies, the Lundy Pony (an extremely hardy pony from the island of Lundy in the Bristol Channel), and American breeds including the American Walking Pony, Pony of the Americas, Palouse, and Chincoteague.

There is a Pony Society Index, a world-wide listing of organizations. A chapter on Running a Pony Stud covers breeding and foaling. There is a brief chapter on exhibiting and judging.

Pony Riding for the Disabled is the most advanced form of activity, apart from swimming, that is enjoyed by disabled persons. In Australia, there are a number of groups of able-bodied persons helping those less fortunate.

The text has 150 photographs, 40 in color, showing ponies of the world. All those interested in ponies, particularly those who would like to know more about the different breeds, will enjoy this book.

AKC Filming

The bucolic background, complete with cows, in some of the terrier video tapes to be released in February was provided by New Bolton Center, the large animal facility of the School of Veterinary Medicine, University of Pennsylvania. From October 1 to 8,



AKC personnel and a camera crew came to the Chester County campus to tape Norfolk and Norwich terriers, miniature schnauzers, bull terriers, Welsh terriers, fox terriers, and Airedale terriers. The filming for the breed standards series even included Norwich terriers going to ground in a wooden tunnel under a haystack. The weather cooperated and the entire filming went without a problem.



William A. MacKay Scholarship Fund

William A. MacKay, Belle Meade, N.J., has endowed a scholarship fund at the School of Veterinary Medicine, University of Pennsylvania.

"Our School receives more applications for admission than any other veterinary school in the nation," said Dean Robert R. Marshak. "Yet the difficulty of obtaining sufficient financial aid turns many bright students away. Mr. MacKay's contribution aids us in our efforts to admit the most highly qualified students, regardless of their ability to pay."

"We wanted to do something for one of the veterinary schools," said Mr. MacKay. "Our veterinarian, Dr. Amos Stults (V'35), is a Penn alumnus, and that in part determined that our contribution would go to the University of Pennsylvania School of Veterinary Medicine. A scholarship fund is a meaningful way to help tomorrow's veterinarians, particularly in light of ever-rising tuition fees."

Mr. and Mrs. MacKay and their six children are ardent dog lovers. "I have had dogs since I was three years old," he said. "My parents owned boxers, German shepherds, and Doberman pinschers. Now my family has wirehaired fox terriers, Doberman pinschers, Lakeland terriers, and Pekingese."